AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A double-layer capacitor[[,]] comprising:

[[-]] ~~having at least one~~ a first electrode having a first polarity;

~~(1) and one~~ a second electrode having a second polarity, the first polarity being different from the second ~~(5) with opposite~~ polarity; and[[,]]

[[-]] ~~having~~ an electrolyte ~~(20), which~~ that is in contact with the first electrode and the second electrode ~~electrodes (1, 5)~~,

[[-]] wherein the first electrode has a first charge of the first polarity and the second electrode has a second charge of the second polarity, and wherein maximum values of the first charge and the second charge are substantially equal ~~maximum charges of the first and second electrode, which are dependent on the polarity of the electrodes, are matched to one another~~.

2. (Currently Amended) A double-layer capacitor[[,]] comprising:

[[-]] ~~having at least one~~ a first electrode having a first polarity;

~~(1) and one~~ a second electrode ~~(5) with opposite~~ having a second polarity, the first polarity being different from the second polarity; and

[[-]] ~~having~~ an electrolyte ~~(20), which~~ that is in contact with the first electrode and the second electrode; ~~electrodes (1, 5)~~,

[[-]] wherein the first and second electrodes have first and second surfaces, respectively, the first and second surfaces being different ~~with opposite polarity have different capacitance-forming surfaces~~.

3. (Currently Amended) The double-layer capacitor of claim 2 ~~according to the preceding claim~~, [[-]] wherein the first and second surfaces have ~~electrodes having opposite polarity have surface areas of~~ different sizes.

4. (Currently Amended) The double-layer capacitor of claim 2 ~~according to one of claims 2 or 3~~, [[-]] wherein the ~~electrodes having opposite polarity comprise the~~ first and second surfaces comprise a same ~~electrode materials~~ type of material, and wherein the first and second surfaces have different masses.

5. (Currently Amended) The double-layer capacitor of claim 2, wherein a ~~according to one of the preceding claims 2 to 4, in which the~~ product of

$$Q^{+}_{V,max} V^{+} = Q^{-}_{V,max} V^{-}$$

is approximately equal for ~~both~~ the first and second electrodes, where Q corresponds to electrode charge and V corresponds to electrode volume.

6. (Currently Amended) The double-layer capacitor of claim 2 ~~according to one of the preceding claims 2 to 5~~, [[-]] wherein the first electrode and second electrode comprise ~~the~~ a same type of electrode material; and [[,]]

[[-]] ~~in which the~~ wherein a product of

$$Q^{+}_{M,max}M^{+} = Q^{-}_{M,max}M^{-}$$

is approximately equal for ~~both~~ the first and second electrodes, where Q corresponds to electrode charge and M corresponds to electrode mass.

7. (Currently Amended) The double-layer capacitor of claim 2 ~~according to one the preceding claims 2 to 6~~, [[-]] wherein at least one of the first and second electrodes comprises carbon.

8. (Currently Amended) The double-layer capacitor of claim 2 ~~according to the preceding claim~~, [[-]] wherein at least one of the first and second electrodes comprises: ~~the electrode is selected from a group of the following electrode materials: a)~~ carbon powder, ~~b)~~ carbon fabrics, ~~c)~~ de-metallized metal carbides, ~~d)~~ carbon aerogels, ~~e)~~ graphitic carbon, ~~f)~~ nanostructured carbon, and ~~g)~~ PVD and/or CVD carbon.

9. (Currently Amended) The double-layer capacitor of claim 2 ~~according to one of the preceding claims 2 to 8~~, [[-]] wherein at least one of the first and second electrodes ~~is selected from a group consisting of~~ comprises a conductive polymer ~~polymers~~, a conductive ceramic, a metal, ~~ceramics~~ and ~~metals or~~ a metal alloy; ~~alloys,~~ and

wherein the first and second electrodes have differently sized surfaces ~~has a large surface~~.

10. (Currently Amended) The double-layer capacitor of claim 2 ~~according to one of the preceding claims 2 to 9~~, [[-]] wherein the electrolyte comprises at least one of ~~is selected from among:~~ a gel electrolyte, a polymer electrolyte, and a liquid gel electrolyte.

11. (Currently Amended) The double-layer capacitor of claim 2 ~~according to one of claims 2 to 9~~, [[-]] wherein the electrolyte ~~is an electrolyte~~ comprises a solution comprising organic and/or aqueous solvents[[,]]; and

[[-]] wherein the double-layer capacitor further comprises:

a separator ~~is disposed~~ between the first and second electrodes.

12. (Currently Amended) The double-layer capacitor of claim 11 ~~according to the preceding claim~~, [[-]] wherein the separator comprises paper, polymer membranes, or glass fibers.

13. (Currently Amended) The double-layer capacitor of claim 2 ~~according to one of the preceding claims 2 to 12~~, [[-]] wherein ~~both~~ the first and second electrodes ~~are structured as layers, forming a layer stack of alternating first and second electrode layers with separators disposed between them~~ are stacked; and

wherein the double-layer capacitor comprises at least one separator between the first and second electrode layers.

14. (Currently Amended) The double-layer capacitor of ~~according to the preceding~~ claim 13, [[-]] wherein the stack ~~is rolled into~~ defines a coil.

15. (Currently Amended) A pseudo-capacitor comprising the double-layer capacitor of claim 2; ~~according to one of the preceding claims 2 to 14, formed as a pseudo-capacitor,~~

[[-]] wherein the ~~two~~ at least one of the first and second electrodes ~~are~~ comprises ~~either~~ metal oxide ~~oxides~~ or conductive polymer ~~polymers~~.

16. (Currently Amended) ~~Use of a double-layer capacitor according to one of the preceding claims in~~ A capacitor battery comprising the double-layer capacitor of claim 2.

17. (Currently Amended) A method ~~for~~ of reducing ~~the~~ a difference between ~~the different~~ maximum charges of a first electrode and a second electrode of a double-layer

capacitor, the first and second electrodes comprising an electrode material, the method comprising ~~electrode with opposite charge, having the method steps~~:

[[A)]] ~~the~~ obtaining a non-corrosion[[-free]] potential range of the electrode material ~~is determined~~ relative to a reference electrode;

[[B)]] ~~the~~ obtaining maximum ~~charge~~ charges of the first and second electrodes relative the reference electrode, the maximum charges being within ~~electrode, which is part of the respective limits of~~ the non-corrosion[[-free]] potential range~~, is determined relative to the reference electrode~~; and

[[C)]] ~~then~~ adjusting the maximum charges so that the maximum charges are closer in magnitude ~~of the two electrodes are matched~~.

18. (Currently Amended) The method of claim 17 ~~according to the preceding claim~~, [[-]] wherein~~, in method step A),~~ obtaining the non-corrosion potential range comprises:

obtaining a ~~difference in~~ potential difference between the ~~two~~ first and second electrodes and the reference electrode; and ~~is set, after which a measurement of the~~

measuring a corrosion current between the first electrode and the second electrode~~, as counter-electrode,~~ at the ~~set~~ potential difference; and[[, is performed.]]

[[-]] wherein~~, in method step B),~~ obtaining the maximum charges comprises ~~using the second electrode as counter-electrode, the~~ integrating current ~~charge that has flowed~~

into the first electrode ~~to obtain first and second potentials until attainment of the upper critical limit potential; and determined by integration the charge current, and the same process is repeated for the lower critical limit potential~~.

19. (Currently Amended) The method of claim 17 ~~according to one of claims 17 or 18~~, [[-]] wherein~~, in method step C), the~~ adjusting comprises increasing a size of a surface of an ~~that~~ electrode ~~whose~~ having a lowest maximum charge ~~is lower is increased~~.

20. (Currently Amended) The method of claim 17 ~~according to claims 17 to 19~~,

[[-]] wherein~~, in method steps A) and B), the same electrode material with the same dimensions is used for~~ the first and second electrodes comprise a same material and have same dimensions when the non-corrosion potential range is obtained and when the maximum charges are obtained; and ~~electrode,~~

[[-]] wherein adjusting comprises increasing ~~in method step C), the~~ a mass of ~~that~~ an electrode having ~~the lower~~ a lowest maximum charge ~~is increased~~.

21. (Currently Amended) The method of claim 17 ~~according to one of claims 17 to 19~~, [[-]] wherein, during adjusting ~~in method step C)~~, ~~the~~ a product of

$$Q^{+}_{V,max} V^{+} = Q^{-}_{V,max} V^{-} \text{ or } Q^{+}_{M,max} M^{+} = Q^{-}_{M,max} M^{-}$$

is ~~set to be~~ approximately equal for ~~both~~ the first and second electrodes, where Q corresponds to electrode charge, V corresponds to electrode volume, and M corresponds to electrode mass.